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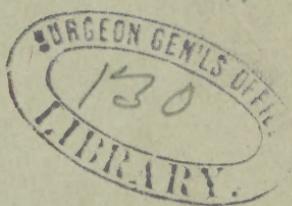
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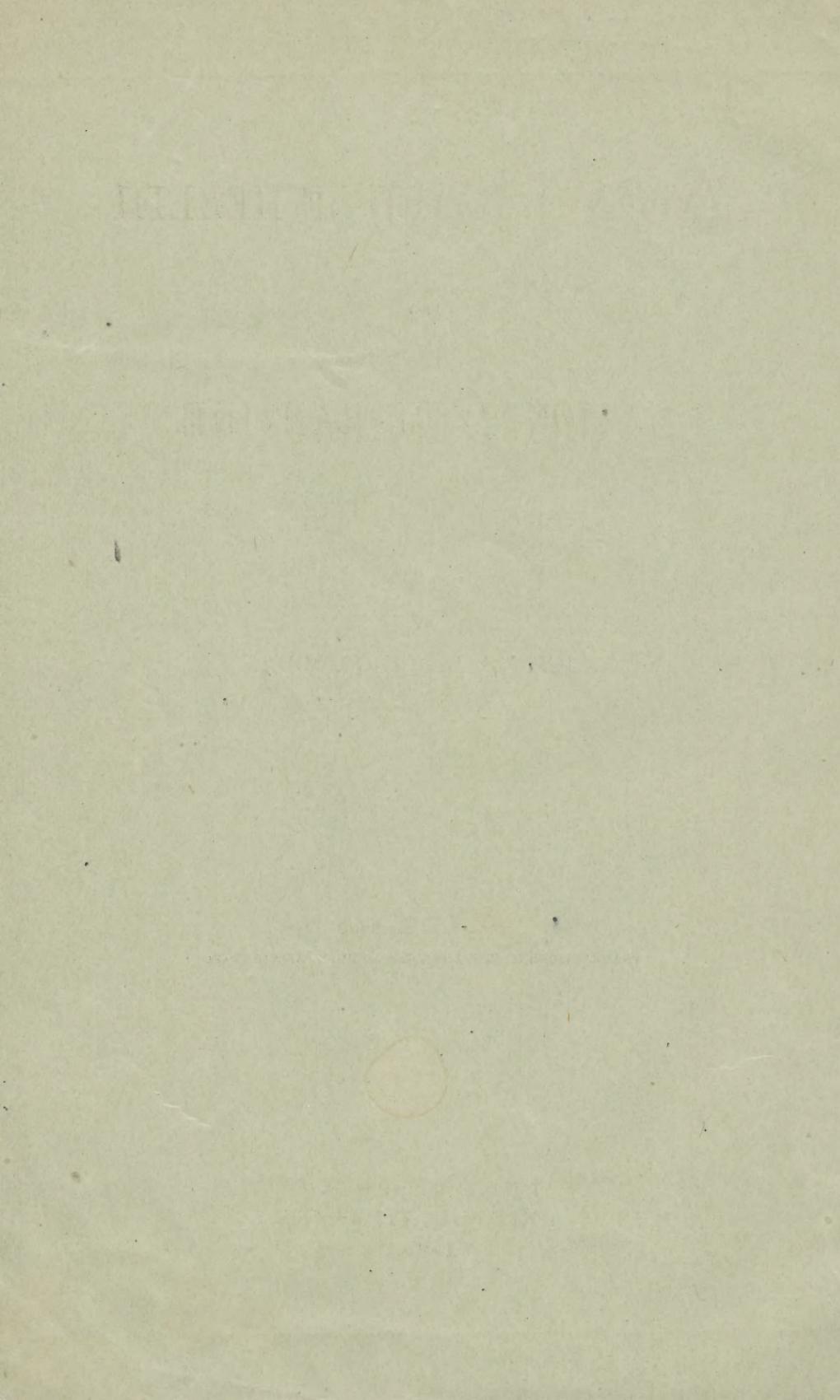
BY

JOHN S. BILLINGS, M.D.,
SURGEON U. S. ARMY.



EXTRACTED FROM THE
TRANSACTIONS OF THE AMERICAN MEDICAL ASSOCIATION.

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IT has seemed good to the chairman of this Section that there should be presented to it, at this meeting, an account of the origin and organization of the National Board of Health, in order that some account of this new medical departure shall form a part of the records of this body, so that Macaulay's *New Zealander* will be able to prepare a full report on the subject, if he can only obtain a complete set of the "Transactions of the American Medical Association."

I have acceded to the request that I should prepare this paper, with some misgivings; but attempts to excuse myself have proved fruitless, and I can only say that I have done the best I could, with the very limited time at my disposal.

That some form of a central sanitary organization must sooner or later be created by the United States, has long been foreseen by those who have given attention to such matters; but it is only within the last ten years that the discussions on this subject have taken any definite form. In saying this, it is not meant to assert that definite proposals for a national quarantine system have not been of a much older date. But a national quarantine system is by no means the equivalent of a national health organization, and the two will be considered as quite distinct in this paper. Each has had its partisans and opponents—the one being in some cases arrayed against the other; and, in order to understand some of the controversies which have arisen with regard to the National Board of Health, it is essential to know that those in favor of such a board, may or may not favor a national quarantine; while some of those most prominent in urging the creation of a national quarantine, have not only not

desired the organization of a National Board of Health, but have most strenuously opposed it. For more than eighty years, and in spite of repeated failures, attempts have from time to time been made to induce Congress to place under some department of the government the control or supervision of the quarantine systems of the several ports of the United States. The immediate cause of these attempts has usually been the occurrence—in some part of the country—of an epidemic of cholera or yellow fever, believed to be due to importation from abroad.

The arguments in favor of a national quarantine system are well known. The various local systems of our several national maritime ports are not uniform as to time, carefulness of inspection, or methods of treating infected ships; nor are the great majority of such ports either willing or able to meet the heavy expense of a really efficient quarantine system, which shall permit vessels to return to commerce with no more delay than is necessary to secure their proper inspection and thorough cleansing. If any port fails to keep up such a system, it to a great extent destroys the value of the quarantines of other ports, and of other places. Hence, the interior of Alabama has been infected through Florida ports; and Arkansas, Mississippi, and Tennessee are to a great extent dependent for safety upon what New Orleans may choose to do, and have suffered severely in consequence. The prevailing ideas, with regard to the powers of the general government, in this respect, may be briefly stated as follows:—

The United States, by virtue of the control which the constitution gives it over commerce with foreign nations, and between States, has the right to prevent ships coming from a foreign country or from another State, from entering any port, unless they have complied with such regulations as it may prescribe. In like manner, it has the right to prevent any conveyance, person, or thing from passing from one State into another, unless such passage be made in accordance with the rules which it may establish. It cannot, however, undertake to interfere with conveyances or persons going from one part of a State to another place in the same State. Whether it has a right to compel a State or city to admit a conveyance or person coming from foreign countries or other States, is a question upon which there is more difference of opinion among jurists; but at present the decided majority are of the opinion that it has no such right, and nearly

all those who think that it does possess such power are of opinion that it would be inexpedient to exercise it.

As it is not proposed in this paper to give any account of the various efforts to secure a national quarantine system, except in so far as these have immediate relation to the origin of the present National Board of Health, it is sufficient to merely allude to the proceedings of the quarantine conventions held in 1859-1860, as containing some interesting and valuable discussions on this subject.

Let us now turn to the subject of a national health organization properly so called.

In 1869 the fact that such a department of the Government would soon become necessary, together with its probable needs, were used as arguments before Congressional committees in favor of the formation of a large medical library in Washington, and the commencement of a complete collection of sanitary reports and statistics; and in the spring of 1870, in connection with reports to the Secretary of the Treasury upon the reorganization of the Marine Hospital service, the relations of a department of public health to the several medical departments of the Government were briefly discussed.

The first published scheme for such a department was the bill prepared by Dr. C. C. Cox in 1871. This bill as introduced into the Senate, in December, 1872, together with the report of Dr. Cox upon the necessity for a national sanitary bureau, will be found in the first volume of the reports of the American Public Health Association.

This bill provided for the establishment, under the direction of the Department of the Interior, of a national sanitary bureau with a chief executive officer to be known as the commissioner of such bureau. His duties, which are specified at great length in the bill, may be summed up as being to collect information on all matters connected with sanitary science, and to report on the same from time to time. He was to appoint whatever additional officers might be required, including chief clerk, chemists, experts, etc. etc.

There was a general feeling among sanitarians that this bill was not opportune, that the circumstances were such that it would lead to purely political appointments, and that the result would be upon the whole prejudicial to the cause of public hygiene. It, therefore, received little or no cordial support.

The American Public Health Association did not recommend its passage, and it was practically pigeon-holed in the Congressional committee to which it was referred.

The yellow fever epidemic in 1873 resulted in the introduction, by Hon. Mr. Bromberg, M. C. of Alabama, of a bill for a national quarantine, which bill was based mainly on the recommendations of Dr. Harvey Brown, U. S. A., who had in 1872 made a report on quarantine on the Southern and Gulf coasts, in which he strongly urged the importance of a national system.

During the winter of 1873-74 several conferences were held at Washington on the subject of a national health bureau and a national quarantine system.

The discussions at these conferences made it clear that there were two distinct parties; the first represented by Mr. Bromberg's bill, which was to prevent the importation of contagious and infectious diseases into the United States—in other words, to secure quarantine alone. For this purpose the surgeon-general of the army, the surgeon-general of the navy, and the supervising surgeon-general of marine hospitals were to constitute a board, whose duty it should be to prepare quarantine regulations which were to be enforced by an officer from one of these services to be detailed for that purpose.

The other party urged that the utility of such a board would be comparatively small, and its existence probably brief. They desired that its scope should be made much wider, somewhat like that of the national sanitary bureau proposed by Dr. Cox, although they did not approve the placing such a bureau at that time under the control of any one man—in other words, preferred a board to a commissioner.

The size of this board, the manner of selecting its members, its precise duties, and the amount which should be allowed for its support, were all subjects upon which it was found hard to reconcile the opposing views.

Mr. Bromberg's bill passed the House and failed in the Senate, not so much because of any active opposition as because of a request made by Mr. Thurman, that it should be passed over to give time for reflection, and his statement of the difficulties of the question is worth quoting. He said: "Every seaboard State, and I believe every State bordering on either of the great lakes, has its police and quarantine regulations for the preservation of its people against any danger of vessels coming into port

with persons having infectious diseases; and those health regulations have been decided by the Supreme Court to be within lawful competency of the States to enact. If that is the case, there is a little trouble in knowing how the United States is to interfere. If the States have authority to make these regulations, and the United States has like authority, it is very easy to see what a conflict of jurisdiction might arise between the officers of the one and the officers of the other. If, on the other hand, the whole matter belongs to the States, then it ought to be left to them; but if it is one of those cases of concurrent jurisdiction until Congress shall act, then the effect of the action of Congress would be to oust the State jurisdiction. It is a question of very great consequence, and I see that the committee in reporting the bill had felt that, and therefore provided that the regulations to be made under this act shall not interfere with the regulations of the several States. But it seems to me that there is very great difficulty in that, for the health regulations of the States are different one from the other. The health regulations of Massachusetts are, perhaps, different from those of New York, and both of them different from those of South Carolina, or of Georgia, or of Louisiana. How this board is to make any general regulations that will be effective, and not interfere with the State regulations, I do not clearly perceive."

For a time this was the end of proposals for national quarantine legislation.

Meanwhile, both in this Association and in the American Public Health Association, the subject of a National Board of Health, properly so-called, continued to be discussed, and in 1875, Dr. H. I. Bowditch, of Boston, acting as chairman of the section of State Medicine and Public Hygiene, delivered an address before the Association, upon a future health council of the Nation, in which he began by the very emphatic declaration that, in his opinion, any attempt to establish a national council until there were State boards of health in every State, would not only be premature, but positively prejudicial to the very object which we all wish to gain.

In this address, which will be found in Vol. 26 of our Transactions, after alluding to the preceding action of the Society on this subject, commencing in 1871, by the resolutions of Dr. Logan, he gave a summary of the prevailing opinions among

his correspondents in the various States and Territories. Of seventeen of these, only two advised immediate action looking to the establishment of such a department.

He then proposed a plan for a national health organization derived mainly from that sketched many years ago by Jeremy Bentham. The essential features of this plan were, first, a Secretary of Health, who should be a member of the Cabinet, and have control of all health matters in the nation, including the medical departments of the Army, Navy, and medical libraries and museums belonging to the country, etc.; second, a health council, composed of one representative from each State, and four representatives at large, to be selected by this Association.

This council was to have advisory powers simply, and to recommend investigations of various kinds to the Secretary.

The prevailing opinion in the Association and among the medical profession, continued to be that the time had not come for urging the establishment of any form of national health organization; that there was great danger that if it were created the appointments would be made for political reasons, and that it was better to encourage the formation of State and local boards of health and wait until the people were educated up to seeing the importance and usefulness of such institutions.

In 1878 the quarantine question again came to the front, and a law was enacted by Congress making it the duty of consular officers to inform the chief of the Marine Hospital Service of the date of departure and port of destination of any vessels leaving any foreign port where contagious or infectious diseases exist, for any port in the United States.

The Surgeon-General of the Marine Hospital Service was charged with the execution of this act, with framing quarantine rules and regulations under it, and with issuing weekly bulletins of information collected by him.

No funds, however, were appropriated for the purpose, and a proviso was inserted to the effect that his rules and regulations should not interfere with those of any State or local system—the result being that the law was practically a dead letter.

Close upon this came the yellow fever epidemic of 1878, the formation, at the expense of Mrs. Elizabeth Thompson, of a commission to investigate this epidemic; and the discussions by the American Public Health Association, in the latter part of November of that year, of so much of the report of this com-

mission as was then prepared. The resolutions adopted by the Association at the close of the discussion may be taken as representing the prevailing opinions of the time among sanitarians, and three of these I will quote:—

“3. That it is the duty of the general government to aid in the establishment of a practical and proper quarantine by all means in its power.”

“5. That it is the duty of the general government to invite foreign nations to co-operate with it in the establishment of uniform and effective international quarantine regulations.”

“6. That whatever may be the practical value of quarantine, there is no doubt of the importance and value of internal sanitary measures in the prevention or modification of epidemic yellow fever, and that this Association strongly urges upon State and municipal authorities the great amount of responsibility which rests upon them on this account at times when no disease is prevalent or threatening.”

As soon as Congress met in the following December, special committees on epidemic diseases were formed in both House and Senate, and the fact that such committees were found necessary is sufficient evidence of the slight attention which had been previously given to the subject of public health by Congress.

A second yellow fever commission, composed of members of the House of Representatives, Senators, and physicians, including those who had been engaged on the work of the previous commission, was created, and proceeded to visit those places where the epidemic had prevailed, and to collect the opinions of the physicians of those localities as to the causes of the spread of the disease, and the best methods of preventing it.

Before the report of the commission was complete, several bills relative to quarantine were introduced, of which the one presented by Senator Lamar, of Mississippi, may be taken as a type. This bill created a department of public health, abolished the office of Supervising Surgeon-General of the Marine Hospital Service, and provided for the appointment of a Director-General of Health, to be in charge of the department, and also of the Marine Hospital Service, who was to make and enforce all quarantine measures and regulations for the prevention of epidemic diseases, or to limit their spread. He was to receive a salary of \$7500 per annum, and only to be removed from office upon a hearing before the Chief Justice of the United States.

The proposal to thus confer almost autocratic power upon a single man met with very general disapproval among sanitarians and medical men throughout the country.

In January, 1879, the executive and advisory committees of the American Public Health Association issued a memorandum upon the legislation then pending in Congress relative to the public health, in which objection was made to any national legislation upon quarantine until more information should be obtained.

It was recommended that Congress should at once provide for the organization of a national health commission, whose duty it should be to report to Congress, at the next session, a plan for a permanent national public health organization to take charge of any investigations into the causes and means of prevention of yellow fever, or other epidemic disease, which might be referred to it by Congress, and that said commission should not be burdened with any administrative duties not connected with the investigation referred to, nor should it be dependent upon or connected with any existing bureau or department of the government.

It was urged that the future of public hygiene in this country depends mainly upon the proper organization of State and local boards of health, and upon such recognition of their importance and utility by the people and their legislators, that the necessary means and powers shall be granted to them to enable them to properly perform their duties; that the general government can do much to stimulate and encourage the formation of such boards; and that an important part of the duty of the national health commission would be to point out what can best be done to forward this object. "Such boards can do good work, not only for their own locality, but for the nation; and, if the nation will pay for this work, it will be most cheerfully done, especially if a proper central health organization be arrived at with which they can co-operate, as we hope and believe will be the case, if the plan suggested be carried out."

A few weeks later the Congressional Yellow Fever Commission presented its conclusions, recommending quarantine, and the formation of a chief health authority at Washington to supervise it. The result of this was the reporting of a bill by Senator Harris, of Tennessee, chairman of the Senate Committee

on Epidemics, which bill created a bureau of public health, having no duties other than those relating to quarantine.

It also created the office of Director-General of Health, who was also to have charge of the Marine Hospital Service; but in connection with him there was to be established a board of health, to consist of seven members, to be appointed by the President, and of the Surgeon-General of the Army and Navy, respectively. The Director-General of Health was to be *ex officio* president of the board.

This board was to frame rules and regulations for quarantine, and in case the health officer at any port appointed by local authority refused to adopt and observe these rules and regulations, or in the opinion of the board of health neglected or failed to do so, then the Secretary of the Treasury was to appoint a health officer of the United States for such port to carry out such rules.

This bill was quite as objectionable to the great majority of sanitarians as the Lamar bill, and met with so much opposition, both from this quarter and from those especially interested in State rights, that although it passed the Senate it was defeated in the House.

In the mean time, Mr. McGowan, of Michigan, after consultation with some sanitarians, introduced a bill just at the close of the session to establish a national board of health, and although this was strongly opposed by the Surgeon-General of the Marine Hospital Service up to the very last moment, it passed both House and Senate in the final hours of the session and became a law.

This act created a National Board of Health, to consist of seven members appointed by the President, one medical officer of the army, one medical officer of the navy, one medical officer of the Marine Hospital Service, and one officer from the Department of Justice.

The duties of the board were to obtain information upon all matters affecting the public health, and to advise the several departments of the Government, the executives of the several States, and the commissioners of the District of Columbia, on all questions submitted by them, or whenever in the opinion of the board such advice may tend to the preservation and improvement of the public health. It was also directed in conjunction with the National Academy of Sciences to report to

Congress a plan for a national public health organization, giving special attention to the subject of quarantine, and consult with the principal sanitary organizations and sanitarians of the several States of the United States with regard to the matter.

Under this act the present National Board of Health was formally organized on the 2d of April, 1879.

In the mean time Congress had convened in extra session, and the representatives from the Southwest had insisted upon the necessity for national quarantine.

Accordingly, an act was passed, approved June 2d, to prevent the introduction of contagious and infectious diseases into the United States—in other words, a National Quarantine Act.

Besides its quarantine features, however, this act authorized the board to publish a weekly bulletin of the information and vital statistics collected by it, and made it the duty of our consular officers to furnish weekly reports as to the health of their stations.

The operations of the board under what may be called its constituting act are not as well known as they should be, which is in part due to the fact that the board has not been able to obtain authority to print the full report of the investigations which have been made under its directions, and of its operations in an educational point of view. The most important of these have been:—

1st. The inquiry as to the best form of a national sanitary organization.

2d. An investigation into yellow fever in Cuba.

3d. The making prominent, both by precept and example, of the importance of sanitary surveys, with instructions as to methods.

4th. Investigation on water and air analysis, on the operation of sewers, on food and drug adulterations, on diphtheria, on disinfectants, etc.

Time is wanting to give any details of this work, but I must allude to the conclusions as to the best form of a national sanitary organization for this country. After conferences and correspondence with the principal sanitary organizations and sanitarians of the country, and with a number of our most prominent scientific men as represented in the National Academy of Science, the opinion was found to be almost unanimous that for the present the existing form of the National Board of Health

is as good as any, and that no change in it should be made until the desirability for such a change becomes much more apparent than it now is.

In accordance with the law which created it, the board, in conjunction with the National Academy, advised Congress to this effect, recommending that for the present no change be made in the plan of organization of the board; that it should continue the special investigations already commenced; and that, in addition to these, investigations should be undertaken by it or under its direction, upon the subjects of cholera, malaria, typhoid and typho-malarial fevers, diphtheria, and cerebro-spinal meningitis, and that it should also carry on sanitary surveys of places remarkably unhealthy or liable to become so.

It was also advised that the Board should take steps to secure as far as possible throughout the country, uniformity in the methods of collecting and reporting vital statistics; and that to this end it should call a convention of representatives of the United States, State and local authorities especially engaged in the collecting and reporting such statistics, with a view to securing agreement upon this subject.

This recommendation has been carried out, and the convention met at Washington on the 6th and 7th of May last. It adopted provisionally the nomenclature of the Royal College of Physicians of London, and appointed a committee to confer with the College, and more especially with its committee, which, it is supposed, is now engaged in the decennial revision of said nomenclature, with the view of obtaining, if possible, for all English speaking people, a uniform system. You are all aware of the attempts made by this Association, a few years ago, to make an improvement upon this nomenclature of the Royal College of Physicians, and of the fact that the whole matter was finally tabled and led to nothing.

The proposition which is now made by the National Board of Health and by the convention called by it, is to adopt provisionally this nomenclature, as far as it goes; leaving every one when he meets with a case which is not fairly represented in this list, to select such name as may seem good to him; and to endeavor to co operate with the college in revising and making additions to the nomenclature to correspond with the additions of modern pathology, and ultimately to organize some form of

standing committee for this country, which shall join with the college in revisions at stated periods.

It is very desirable that this Association should interest itself in this matter, and should appoint a committee to co-operate and advise in the revision proposed, and I would suggest that a resolution should be reported from this Section to the Association for the appointment of a committee for the purpose of co-operating with the two committees above referred to, and with the National Board of Health, in regard to these matters.

The convention also took steps to secure uniformity in the forms of certificates of births, deaths, and marriages, and in the methods of recording and tabulating these, which in due time will probably lead to improvements in the vital statistics of the country.

The preliminary report of the Havana Yellow Fever Commission is, no doubt, familiar to all. The most important part of this work was to destroy a large number of unfounded theories, and to clear the ground for future work in definite directions, such, for instance, as has been pointed out by Dr. Woodward in his report on the Histological Pathology of Yellow Fever, published by the board as Supplement No. 4 to the Bulletin.

Advancement in this direction can only be hoped for from specially trained observers, and the board proposes to take steps to have at least one observer properly fitted for this purpose to continue the research. In the mean time researches are now being made by the aid of photomicrography in New Orleans with regard to suspended matters and minute organisms in the air of that city and the marshes of the vicinity, and these photographs will be compared with other photographs, collected in like manner, if the fever appears at that point or vicinity.

The investigation into the flow of sewers, made at the request of the board, by Col. Geo. E. Waring, has already had the important practical result of leading the authorities of Memphis to accept the system of sewerage which was within their means as adequate to the wants of the city, instead of a system which would have cost nearly five times as much. The investigation now in progress as to the best methods of determining both quantitatively and qualitatively organic matters in the air under the direction of Prof. Remsen, of the Johns Hopkins University, is also one from which in the future important results may be hoped for.

Thus far the work has mainly been in the nature of criticism showing the unreliability of methods of analysis heretofore used. During the coming year it is proposed by the board to undertake investigation into diphtheria and malaria, and more especially into the pernicious forms of malaria, and those accompanied by hemorrhages.

Prof. H. C. Wood, of Philadelphia, is now engaged in a series of experiments to determine the possibility of communicating diphtheria to animals.

In all such investigations it should be remembered that negative results, when based upon a sufficient number of carefully conducted experiments by scientific observers, have in themselves a positive value, and limit the field to which future investigators may profitably apply their efforts.

Let us now review briefly the National Quarantine System, as established by the act of June 2, 1879, and the results which have been obtained by it. This act provides that no vessel coming from any foreign port where contagious or infectious disease exists shall be allowed to enter any port in the United States unless she has a certificate or bill of health signed by the consular officer of the United States at the port of departure. The National Board of Health is to make rules which, when approved by the President, will govern the forms and condition of giving such a certificate. The law left it to the national board to determine what should be considered as contagious or infectious diseases. Evidently, if these terms were used in their medical sense, there would be very few ports in the world which would not come under this law. The board, however, has decided that the only diseases which for the purposes of the act are to be recognized as contagious or infectious, are cholera, yellow fever, plague, small-pox, and relapsing and typhus fevers.

The intent of this part of the act was to confer great power on the board, but it failed in its object for two reasons.

The first is that it was accompanied by a proviso that no vessel should be subject to the penalties imposed by the act unless the rules prepared by the national board, and approved by the President, should have been officially promulgated at the port of departure at least ten days before her sailing. Such official promulgation, however, cannot be made without the consent of the authorities of the place, and in Cuba this consent was refused.

The second cause of failure of this part of the act was due to the fact that to render a vessel liable to its penalties it was necessary to prove in court that contagious or infectious disease actually existed at the port at the precise date of sailing of the vessel—which proof usually could not be furnished.

In view of these failures the board, in conjunction with the National Academy, recommended additional legislation to the effect that all vessels coming from ports lying between certain parallels of latitude shall be required to furnish the certificate or bill of health, just referred to, irrespective of the existence of contagious or infectious diseases in such ports, or of the official promulgation of the rules of the board in such ports.

It also advised legislation to authorize the President of the United States to call an International Sanitary Conference, to which the several Powers having jurisdictions of ports likely to be infected with yellow fever should be invited to send delegates for the purpose of securing an international system of notification as to the actual sanitary condition of ports and places under the jurisdiction of such Powers, and of vessels sailing therefrom.

The object of the conference was thus limited, instead of making it to secure an international system of quarantine, for the reason that the United States could not undertake to enforce any international system of quarantine, properly so called, since to do this it must override State and local legislation on this subject, and guarantee that vessels should be allowed to enter any port in this country irrespective of its quarantine laws.

This recommendation of the board has become a law, the word cholera being inserted in addition to yellow fever, and it is to be hoped that this conference will lead to very important practical results.

This act of June 2d also directed the board to aid State and local boards of health in carrying out their quarantine regulations, and provided funds for this purpose. If the quarantine rules of the local boards are not sufficient, the national board may make additional rules, which, when approved by the President, must be enforced by the sanitary authorities of the States, or else the President may detail an officer to do it for them. This, however, does not give the board the slightest power towards what may be called forcing intercourse.

That is to say, after all its rules have been complied with, it

has not power to assure to any vessel, steamboat, or train of cars, that it will be allowed entrance to any given port or place, since the local authorities of such port or place may enforce additional rules, even to non-intercourse, at their discretion.

It is probably unnecessary to remind you of the operations of the board under this act during the last summer. Through the assistance given by it to the State boards of health of Tennessee, Arkansas, Mississippi, Louisiana, and Illinois, and in a less degree to Texas, there is no doubt that the progress of the epidemic last summer was greatly restricted, and that commercial intercourse was kept up under circumstances which, in the absence of such aid, would have prevented travel and traffic to a great extent.

I will only allude here to the effects of the work of the board on the traffic of the Illinois Central Railroad, a note on which will be found in the Bulletin, of May 15th. From this it appears that the tonnage received and forwarded by that road at Cairo, Ill., for the last six months of 1878 and of 1879, was respectively 267,411,200 and 367,869,800 tons; forwarded, 87,300,600 and 129,833,800 tons.

The great difference in favor of 1879 is more than can be ascribed to increase of trade, and is largely due to the different quarantine regulations in force. In 1878, there was practically an exclusion of everything from the South, while under the inspection system of 1879 only dangerous articles were excluded. Dr. Rauch, the Secretary of the Illinois State Board of Health, reporting this, says that "this result could not have been reached without the co-operation of the National Board of Health, and the utmost exertions and repeated assurances of its inspector, as to precautions along the Mississippi River, were required to allay the fears of the local authorities." As it was, though not a single case of yellow fever occurred in Illinois in 1879, one-third of the people of Cairo were ready for immediate flight from July to September. The statement of tonnage being for one railroad alone, which pays to the State seven per cent. of its net earnings, the amount gained by increase of trade was many times greater than the whole expenditure for sanitary purposes.

After an experience of one season under this quarantine act, the board, in conjunction with the National Academy of Sciences, and in accordance with law, advised "that the Na-

tional Board of Health, or, in the interval of its sessions in seasons of emergency, the executive committee, shall be charged with the duty of reporting to the President when any given city or locality is considered to be dangerously infected with contagious or infectious disease; and that upon the official publication by the President of such report, the transportation of goods or persons from the place thus proclaimed as dangerously infected, into other States, shall be forbidden under penalties to be imposed under the jurisdiction of the United States Courts, unless such transportation is carried on in accordance with rules and regulations approved by the National Board of Health."

The object of this recommendation was to induce local authorities to refrain from declaring quarantine, often unnecessarily, by fixing the responsibility of declaring when such quarantine was necessary upon the National Board and the President. It was never intended to give the board more power, since it already has the power, with the approval of the President, to prescribe the minimum of precaution which shall be taken by any State against an infected place in another State.

When introduced as a bill in the Senate by Senator Harris, of Tennessee, opposition was made to it on the ground that it would interfere with State rights, and would confer a dangerous power on the national authorities. This opposition came mainly from medical men, whose solicitude lest local self-government should be interfered with seems to have been much greater than that of business men or politicians.

In a sanitary point of view it is unimportant, and the question is one that can best be left to business men to settle.

As regards maritime quarantine, it is proposed by the board to aid the ports of the South Atlantic and Gulf coasts, in a more systematic manner than heretofore, by the establishment of three or four relief stations for infected ships, to which vessels can be sent from the various Southern ports when found to be infected and to require treatment. These several ports, then, need only incur the expenses of a proper inspecting station and inspecting officer, while the stations established by the National Board of Health at Sapelo Sound, Hampton Roads, Ship Island, and perhaps at Galveston, can serve as general hospitals, so to speak, for the benefit of the numerous small ports which cannot afford the expense of constructing and maintaining a large station.

A complete quarantine station can hardly be established at a

cost of much less than \$50,000, and to maintain it would require an annual expenditure of from \$10,000 to \$15,000 at least. Such a station has been compared to a fort. It may not be needed for several years, but when it is required it may in a single season save many times the expenses of its construction and maintenance. It is, however, hopeless to expect that the smaller Southern ports can each establish and maintain such stations, and it is just here that the aid of the national government can be most profitably extended.

Let us now consider some of the objections to the National Board of Health, and the practical difficulties which lie in its way.

In the first place, we have seen that its creation was in one sense premature. Forced into existence in an emergency, it was only to be expected that as soon as this emergency had passed it would find itself without the support of an educated public opinion, and upon such an opinion alone, under our form of government, can such an organization securely rest. The education of our people, however, sometimes goes on very rapidly, and this has undoubtedly been the case in regard to sanitary matters within the last eighteen months, to an extent which probably no sanitarian had anticipated. Although comparatively few as yet understand the organization or powers of the board, or have any clear idea of what it has done or is trying to do, still there are a large number of physicians and scientific men who have become more or less interested in its operations and publications, and who would now prefer to see it improved rather than abolished. It was fortunately so composed that its members could hardly be suspected of political or personal motives; and although by a few persons it has been charged with grasping for power, it is tolerably well understood that this charge has no foundation, and that its main objects have been to promote original investigations, to collect information as to the condition of the public health, and to stimulate the formation of State and local boards of health, which should have as much real unquestionable authority as possible, and to aid them in their work in all possible ways.

It has also been fortunate for the board that it has had comparatively little patronage to dispense, and that it has so managed that the greater portion of this patronage has been made upon the recommendations of State or local boards of health; as it is, the pressure upon it for appointments to the half a dozen

clerkships and the ten or fifteen inspectorships it has thought proper to create, has made it some enemies among disappointed candidates and their friends.

The principal objections, however, to the National Board of Health and to the system of quarantine inspections and relief stations which it has proposed to inaugurate, are made on the ground of expense. These objections, as urged in the daily press, and by members of Congress, may be stated as follows:—

I. Every port or State ought to take care of itself, and furnish the means for doing it. The Northern States and cities do this, and do not desire any help from the general government. Why do not Southern ports and cities do the same? and why should the whole country be taxed to pay their local expenses?

The answer to this is that, as a matter of fact, they do not do it; that they probably cannot do it; and that the evil results of such failure affect not them only, but the whole country. The interest on the money which, during the last fifteen years has been raised by voluntary contributions in the North to aid Southern communities affected with yellow fever, would more than pay the expenses of the system of prevention which is proposed.

The second objection is this: Granting the utility of the preventive means proposed, and also that in the interests of commerce and of the national revenue, as well as of humanity, it is wise for the United States to furnish the means, cannot these means be supplied without creating a National Board of Health to control them? A board is a cumbrous and costly institution, and although its members may be scientific, that rather makes it improbable that they should be good business men, or possess executive ability?

The reply is that the national board was not created to disburse funds for quarantine, but to do much more difficult and important work, as I have tried to explain in this paper. But having such a board, it seems more proper to refer to it such work, connected with quarantine, as the general government may undertake than to send such work to some other bureau. This, however, is a mere detail as to executive work; the point is that the board has other work to do, and that its utility does not depend solely or even mainly on its quarantine work.

I have said above that the creation of the board was premature, in one sense; I mean by this that our legislators, when they created the board, did it for quarantine purposes, and not

for the true purposes of a sanitary board, and they measure its utility solely with reference to its power to prevent the entrance or spread of contagious or infectious disease. The very title of the act which created it is misleading. It is called "An Act to prevent the introduction of infectious and contagious diseases into the United States, and to establish a National Board of Health;" but a very slight examination of this act will show that it has nothing to do with preventing the introduction of infectious and contagious diseases, or, in other words, with quarantine.

I have elsewhere expressed the opinion that the remedy for the evils connected with local quarantines, as they have heretofore been managed, is "the education of the people until they shall know what amount of restriction is really necessary to insure safety, and it seems, on the whole, expedient that the cost of this education should be borne by the general government. It follows, therefore, that the United States should for a time bear a much larger proportion of the expenses of a quarantine system than it will need to do when the States and municipalities are equally well informed as to their duties, and as to their true interests."

What shall we say as to the future of this National Board of Health? For a premature birth, the infant seems healthy and lively, but it would be rash to make any prophecies as to its immediate future, since this depends so largely upon the contingencies of the next few months.

There still prevails over a large section of the country, and in the minds of many of our legislators, the idea that the main purpose and use of the board is to prevent the entrance of yellow fever into this country, and that, if yellow fever does appear here, it shows that the board is useless. Until this idea is changed, and the public obtains a much broader conception of the field of labor of a national health organization, the very existence of the board hangs upon a slender thread, for until we know much more of the nature of the cause of yellow fever and its methods of propagation than we now know, it is probable that this disease will continue to appear whether we have a national board or not. If it depends exclusively on importation, it will at times pass any quarantine system which now exists in this country, or which is likely to exist for a long time.

All that any system can effect with our present knowledge

is to prevent its entrance nine times out of ten; but this is well worth striving for. If yellow fever depends on local sanitary conditions, there is little hope that these will be done away with in many of our Southern cities and towns for years to come. By properly constituted and intelligent State and local boards, stimulated and aided by the national board, no doubt much may be done to prevent the origin, and limit the spread of this disease, and if the co-operation of other powers of the intertropical Atlantic can be obtained, its field may be restricted within very narrow limits.

Under existing laws, and in the prevailing state of public opinion, it is a necessity that the national board should give special attention to quarantine matters, and much the greater part of the funds under its control have been granted for that purpose only. But in common with all intelligent sanitarians and physicians the board sees clearly enough that its most important fields of usefulness lie in other directions, and it has done enough already in those fields to make it probable that hereafter this country will not be without some central sanitary organization irrespective of the question of a national quarantine system.

That this organization will remain permanently in the form of the present National Board of Health is improbable. The tendency just now is towards the plan sketched by Dr. Bowditch, involving a representation of all State boards in a general council, with a single executive officer to be chosen by the council; but there are many practical difficulties in the way of this plan. To make it effectual, concurrent legislation on the part of the several States and of the United States will be necessary, and a very extensive educational process must be gone through with before such legislation can be secured; and it seems to me that one of the first steps in this process is to show what the sanitary condition of our cities, towns, and villages actually is, which is to be effected by a uniform system of vital statistics and by sanitary surveys.

In conclusion, permit me to repeat what I have elsewhere said in this connection:—

“In sanitary matters no single man, city, State, or nation can protect itself, except by non-intercourse, and not always even by that. To get the best results with the least cost and interference with freedom, we must help one another; but this help

must be given, received, and regulated on business principles, 'because it will pay,' and not be considered as sentimental charity, which will sooner or later be grudgingly bestowed and unthankfully received. We want our citizens and cities, counties, and States to take care of themselves in sanitary as in other matters as far as possible; but there should be some power competent to interfere in the exceptional cases in which selfishness, ignorance, or terror leads either to danger of pestilence or obstruction of commerce. This power, however, cannot be established arbitrarily, or in advance of sufficient education of the business portion of the community to create a powerful public opinion to support it. Whether it is possible to supply this education otherwise than through the lessons which epidemics themselves give is the problem which the sanitarians of this country are at present practically trying to solve."¹

¹ International Review, Jan. 1880, p. 49.

